SUMMER TRAINING REPORT

Information Technology Institute (ITI)

Training Duration: 2024, July 15th to September 15th
Training Hours: 150 hours

Submitted by: Samer Yousry Mohamed

Introduction

The Information Technology Institute (ITI) is a premier institution dedicated to providing high-quality education and training in various domains of information technology. During the summer of 2024, I had the privilege of undergoing intensive training at ITI, where I delved into a range of technologies, including HTML, HTML5, CSS, CSS3, JavaScript, ECMAScript, and ReactJS. This report outlines my experiences and learnings from this comprehensive training program.

Training Overview

• HTML & HTML5

During the training, I studied the fundamentals of HTML, including text, links, lists, images, and various other HTML tags. I also learned about deprecated tags, semantic tags, audio and video elements, and form elements. With HTML5, I explored new features that enhance the capabilities of HTML, making web pages more dynamic and interactive.

• CSS & CSS3

In CSS, I studied selectors, syntax, and properties. I also learned about positioning elements, managing overflow, and grouping similar selectors. Additionally, I explored advanced styling techniques, such as border-radius, box-shadow, text-shadow, 2D-transforms, transitions, flexbox, and media queries. These skills enabled me to create visually appealing and responsive web designs.

- ## JavaScript

In JavaScript, I studied variables, mathematical operators, conditional statements, loops, functions, events, DOM selection and manipulation, comparisons between var, let, and const, JSON, and working with dates and times. This comprehensive training equipped me with the necessary skills to create interactive and dynamic web applications.

- ## ECMAScript

In ECMAScript, I studied const and let, arrow functions, template literals, new string methods, the spread operator, default parameters, rest parameters, object destructuring, array destructuring, JavaScript sets, modules, object-oriented programming (OOP) in JavaScript, constructors, classes, inheritance, encapsulation, APIs, and array methods. This extensive training helped me understand modern JavaScript standards and improve the efficiency and maintainability of my code.

- ## ReactJS

The training included an in-depth study of ReactJS, a popular JavaScript library for building user interfaces. I learned how to create dynamic and responsive web applications using React components and state management.

Projects and Practical Experience

Individual Projects

I worked on several individual projects, which allowed me to apply the concepts and techniques I learned during the training. These projects include:

1. Landing Page: Developed a modern and responsive landing page that showcases the core features of a fictional product or service.
2. Furniture Website Page: Created a visually appealing website page for a furniture store, focusing on layout, design, and user experience.
3. Calculator: Built a functional calculator application using HTML, CSS, and JavaScript to perform basic arithmetic operations.

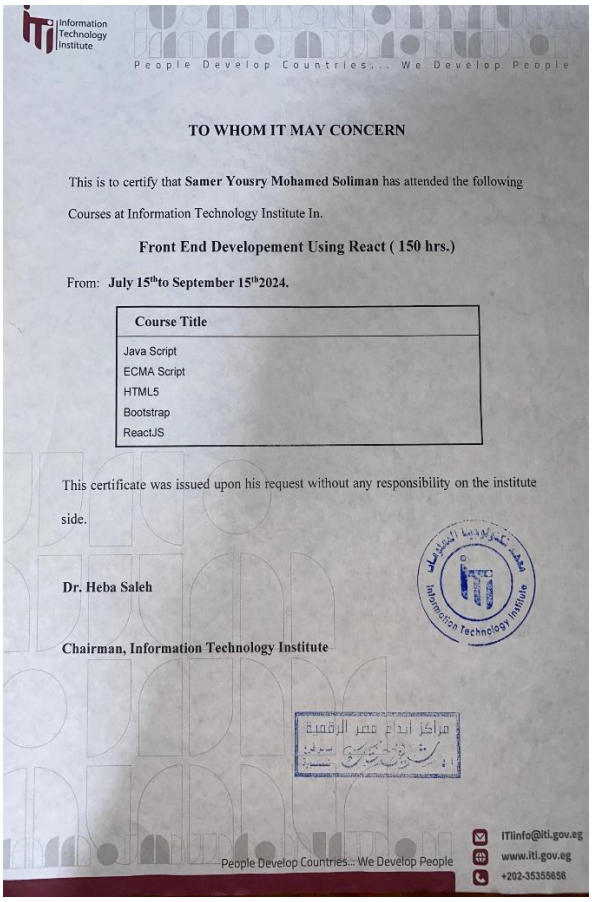
Group Projects

Collaborative projects were an integral part of the training, providing opportunities to work in teams and develop complex applications. One of the key group projects was the development of a full online shop website. This project involved using React for the front end and incorporating a backend to manage product listings, user authentication, and order processing.

Conclusion

The summer training at ITI was a transformative experience that has significantly enhanced my technical skills and knowledge. I gained a solid foundation in various web development technologies, including HTML, CSS, JavaScript, ECMAScript, and ReactJS. This training not only improved my coding abilities but also fostered my problem-solving skills and teamwork capabilities. I am now better equipped to take on complex projects and contribute effectively to future endeavors. I look forward to applying these skills in my upcoming projects and career, with a strong confidence in my ability to create innovative and efficient web applications.

Certificates



Information Technology Institute

People Develop Countries... We Develop People

TO WHOM IT MAY CONCERN

This is to certify that **Samer Yousry Mohamed Soliman** has attended the following Courses at Information Technology Institute In.

Front End Developement Using React (150 hrs.)

From: **July 15th to September 15th 2024.**

Course Title
Java Script
ECMA Script
HTML5
Bootstrap
ReactJS

This certificate was issued upon his request without any responsibility on the institute side.

Dr. Heba Saleh

Chairman, Information Technology Institute

Information Technology Institute

مراكز أيداع مصر الرقمية

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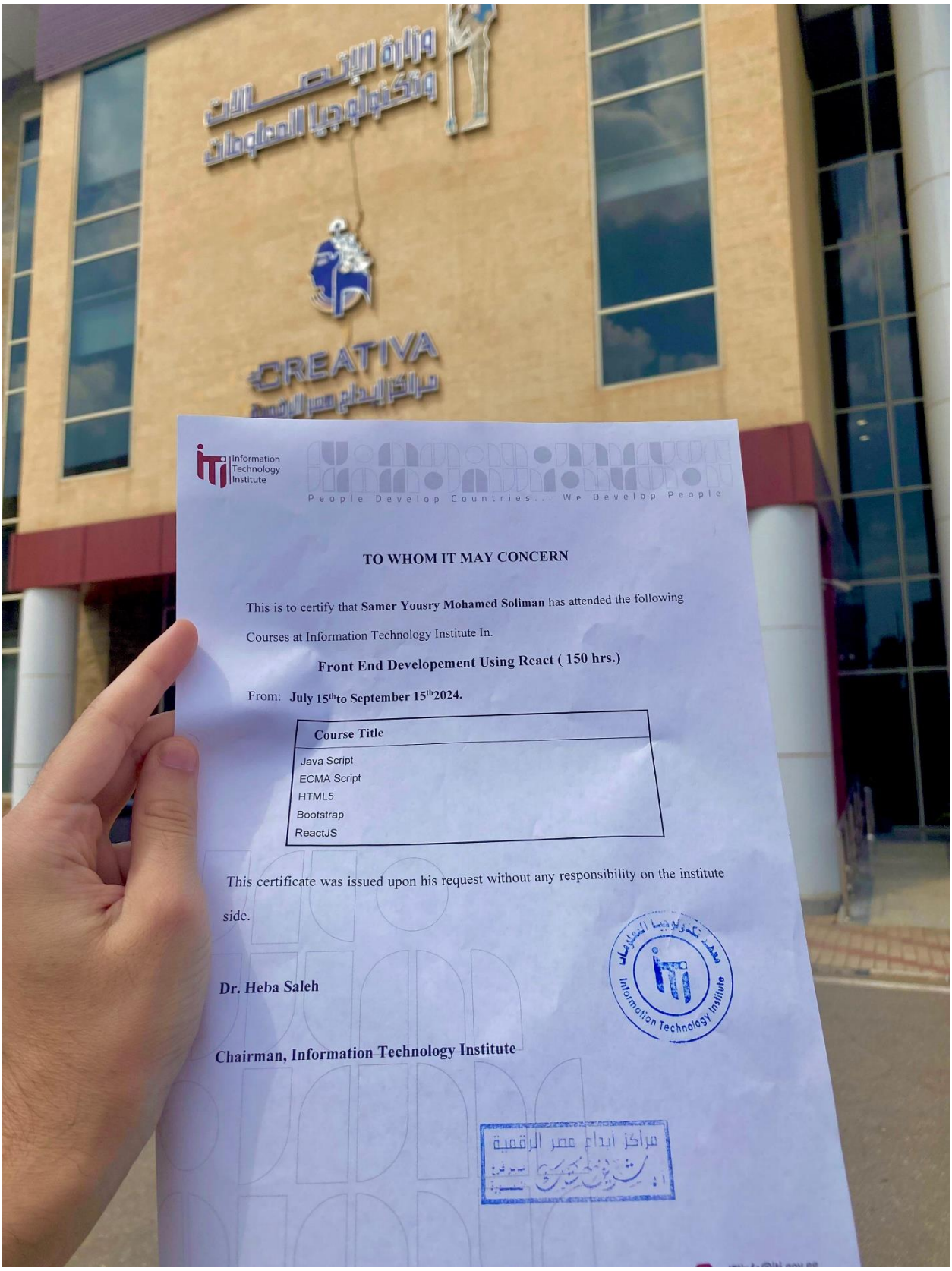
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References

- Mozilla Developer Network (MDN) Web Docs: Comprehensive resource for web technologies including HTML, CSS, and JavaScript.
- W3Schools: Tutorials and references for web development languages.
- ECMAScript 6 documentation: Official documentation and resources for ECMAScript 6 features.
- ReactJS Documentation: Official guide and API reference for ReactJS.
- ITI Course Materials: Course notes and resources provided during the training program.

Self-Learning Journey

In addition to the structured training at ITI, I took the initiative to further my knowledge in backend development with Node.js. This self-directed learning included:

- CRUD Operations: Learned how to create, read, update, and delete data in a database.
- Setting Up Files with MVC: Organized code using the Model-View-Controller architecture.
- Connection with MongoDB Database: Established connections to a MongoDB database for data storage.
- Server-Side Validation: Implemented validation for user input on the server side.
- User Password Authentication: Developed secure methods for user authentication.
- Authorization and Protecting Routes: Implemented authorization mechanisms and protected routes.
- Sessions and Cookies: Managed user sessions and cookies.
- Tokens and JSON Web Tokens: Used tokens for secure communication and authentication.
- Uploading Files: Enabled file uploads and managed file storage.
- Hashing vs. Encryption: Learned the differences between hashing and encryption for securing data.
- Session-Based Authentication: Implemented session-based authentication mechanisms.
- Server-Side Rendering vs. Client-Side Rendering: Compared server-side and client-side rendering techniques.

- REST APIs: Built and consumed REST APIs.
- Advanced MongoDB Queries: Performed complex queries with MongoDB.
- Enhancing API Functionality: Improved the functionality of APIs.
- Dealing with JSON Data: Managed JSON data effectively.
- HTTP Methods and Status Codes: Used HTTP methods and understood status codes.
- REST Routing Convention: Followed REST routing conventions.
- OAuth 2.0 and Third-Party Authentication: Implemented OAuth 2.0 for third-party authentication.
- Authentication using Passport.js: Utilized Passport.js for authentication.
- API Security: Implemented security measures for APIs.
- Rate Limiting and Controlling Traffic: Controlled API traffic with rate limiting.